Pioneer sound.vision.soul

DJ MIXER

DJM-3000

Operating Instructions

Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However the method of connecting and operating the unit is the same. K015 En

CAUTION:
This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances such as radios and televisions, use shielded cables and connectors for connections. H012 En

IMPORTANT

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT SAFETY INSTRUCTIONS H003 En

READ INSTRUCTIONS — All the safety and operating instructions should be read before the product is operated.
RETAIN INSTRUCTIONS — The safety and operating instructions should be retained for future reference.
HEED WARNINGS — All warnings on the product and in the operating instructions should be adhered to.
FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.
CLEANING — Unplug this product from the wall outlet before cleaning. The product should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.
ATTACHMENTS — Do not use attachments not recommended by the product manufacturer as they may cause hazards.
WATER AND MOISTURE — Do not use this product near water — for example, near a bathtub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
ACCESSORIES — Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
CART — A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

VENTILATION — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
POWER SOURCES — This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.
LOCATION – The appliance should be installed in a stable location.
NONUSE PERIODS – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

GROUNDING OR POLARIZATION
- If this product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other), it will fit into the outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- If this product is equipped with a three-wire grounding type plug, a plug having a third (grounding) pin, it will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
OUTDOOR ANTENNA GROUNDING — If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.
LIGHTNING — For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
POWER LINES — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

OVERLOADING — Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
OBJECT AND LIQUID ENTRY — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
SERVICING — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
DAMAGE REQUIRING SERVICE — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance — this indicates a need for service.

REPLACEMENT PARTS — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized sub-stitutions may result in fire, electric shock, or other hazards.
SAFETY CHECK — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
WALL OR CEILING MOUNTING — The product should not be mounted to a wall or ceiling.
HEAT — The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

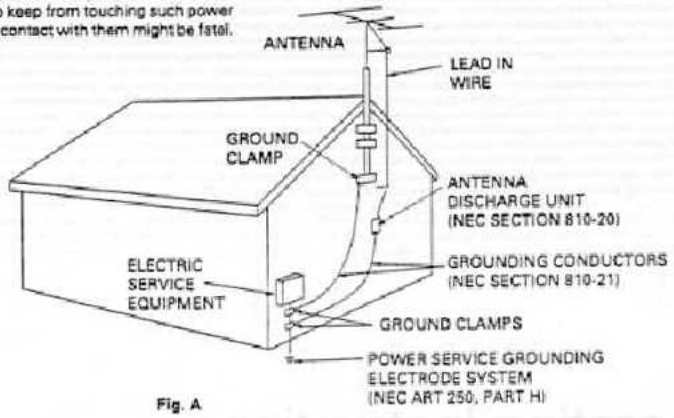
ANTENNA
LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
GROUNDING CONDUCTORS (NEC SECTION 810-21)
ELECTRIC SERVICE EQUIPMENT
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

Fig. A

NEC — NATIONAL ELECTRICAL CODE

WARNING: THE APPARATUS IS NOT WATERPROOFS, TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE AND DO NOT PUT ANY WATER SOURCE NEAR THIS APPARATUS, SUCH AS VASE, FLOWER POT, COSMETICS CONTAINER AND MEDICINE BOTTLE ETC. H001AEn

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT. H007A2L

IMPORTANT NOTICE

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]
This Class B digital apparatus complies with Canadian ICES-003.

[Pour le modèle Canadien]
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada. H009 2L

Information to User
Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment. H011 En

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help. H010 En

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Dear Customer:

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion-and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:
- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:
- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

We Want You Listening For A Lifetime

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

Decibel Level	Example
30	Quiet library, soft whispers
40	Living room, refrigerator, bedroom away from traffic
50	Light traffic, normal conversation, quiet office
60	Air conditioner at 20 feet, sewing machine
70	Vacuum cleaner, hair dryer, noisy restaurant
80	Average city traffic, garbage disposals, alarm clock at two feet.

THE FOLLOWING NOISES CAN BE DANGEROUS UNDER CONSTANT EXPOSURE

90	Subway, motorcycle, truck traffic, lawn mower
100	Garbage truck, chain saw, pneumatic drill
120	Rock band concert in front of speakers, thunderclap
140	Gunshot blast, jet plane
180	Rocket launching pad

Information courtesy of the Deafness Research Foundation.

S001 En

FEATURES

Effect Mixing
Changing between three kinds of effect mix (ECHO, ZIP, ROLL) can be performed easily merely by operating the Cross fader lever, or by pressing the Effect select/start switch.

BPM Counter
The auto BPM counter provided makes music tempo visible to the eye.

Peak Level Meter
The peak level meter provided is equipped with 11-bit LED indicators for all channels.

Fader Start/Stop
The CD player can be started or stopped simply by increasing or decreasing the level of the cross fader or channel fader. (This function can only be used when the Pioneer CD player series CMX-3000, CMX-5000, CDJ-1000, CDJ-100S, CDJ-700S or CDJ-500 II is connected.)

3-Band Equalizer and Kill
This 3-band equalizer corresponds to the HI, MID, and LOW channels. The attenuation level also serves as a kill function, which can decrease the level to –26 dB.

Variety of Effects
Both internal and external effects can be applied to all channels, the microphone, and master.
A variety of effects can be enjoyed, including delay, echo, auto pan, auto trans, filter, flanger, reverb and pitch shifter.

Full range of input and output functions
This DJ Mixer is equipped with 4 (+3*) LINE inputs, 4 PHONO (dedicated MM) inputs, and 2 (+1*) MIC inputs, for a total of 10 inputs. In addition to 2 master output lines (one supporting professional-grade XLR mode), a variety of other independent outputs are also provided, including booth monitor output, recording output, and two digital outputs. SEND/RETURN jacks are also provided for the connection of external effects units.
* These additional connectors can optionally be switched from PHONO input to make up the total.

CHECKING ACCESSORIES

- 2 short-circuit pin plugs
  These are inserted in the PHONO 4 terminals.
- Operating instructions
- Warranty

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CAUTIONS REGARDING HANDLING

Location

Install the unit in a well-ventilated location where it will not be exposed to high temperatures or humidity.

- Do not install the unit in a location which is exposed to direct rays of the sun, or near stoves or radiators. Excessive heat can adversely affect the cabinet and internal components. Installation of the unit in a damp or dusty environment may also result in a malfunction or accident. (Avoid installation near cookers etc., where the unit may be exposed to oily smoke, steam or heat.)
- When the unit is used inside a carrying case or DJ booth, separate it from the walls or other equipment to improve heat radiation.

Installing the DJM-3000 in an EIA rack

The screw holes on the front panel of the DJM-3000 are designed for use in attaching the unit to a 19-inch EIA rack.

- Attach the unit to the rack using screws of the appropriate size (screws not provided with the unit).

Note

- Never place this unit directly above a power amplifier, as the heat given off by the amplifier might result in damage to the unit. Placing the unit directly above a power amplifier might also result in ham radio signals being picked up or in other types of interference.
- Allow at least 1U (43.7mm) space between this component and the one mounted above it, so as to assure that the cords connected to this unit's input/output connectors and terminals do not touch the component above.
- Always be sure to remove the unit from its rack before shipping.
- When moving the unit while still installed in its rack, exercise caution to avoid subjecting the unit to shocks or vibration.

Condensation

When this unit is brought into a warm room from previously cold surroundings or when the room temperature rises sharply, condensation may form inside, and the unit may not be able to attain its full performance. In cases like this, allow the unit to stand for about an hour or raise the room temperature gradually.

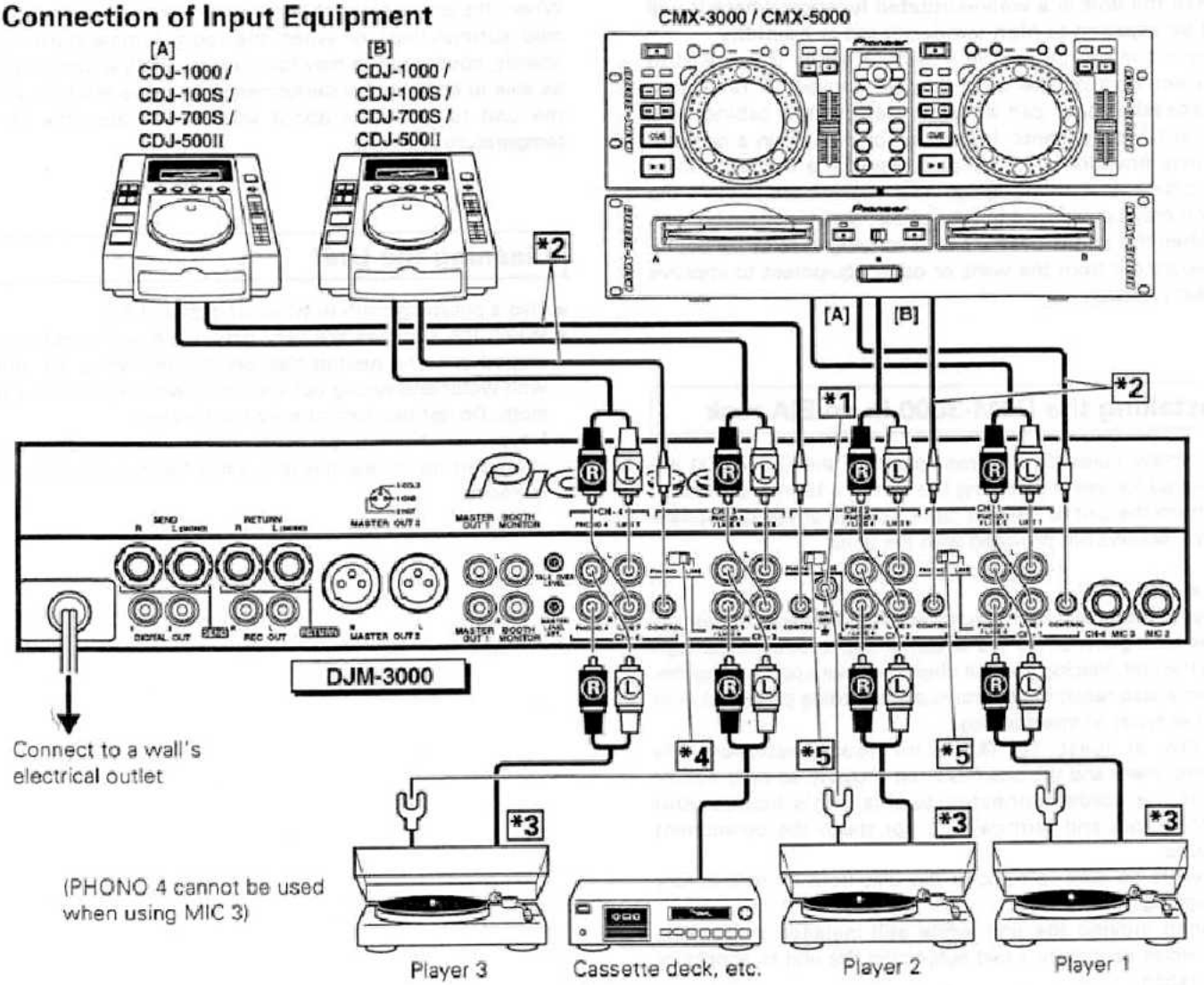
Cleaning the Unit

- Use a polishing cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water and wrung out well, then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

CONNECTIONS

When connecting or changing the connection of units, make sure to first turn off the power switch and disconnect the power cord from the outlet.

1. Connection of Input Equipment



When connecting an analog player to the CH-4 PHONO 4 connectors, first remove the short-circuit pin plugs (2) from the jacks.
The short-circuit pin plugs are provided to reduce any residual noise when an analog player is not connected to the PHONO 4 jacks, thus producing the highest possible sound quality. After removing the pin plugs, store them securely, and replace them in their original jacks any time an analog player is not physically connected.

*1 Connect the cord for the analog player's ground.
This terminal is exclusively for an analog player and is not a safety earth.

*2 If you are using the unit with the separately sold CMX-3000, CMX-5000, CDJ-1000, CDJ-100S, CDJ-700S, or CDJ-500 II connected to the LINE terminals, the fader start function can be used if the unit and CD player are connected with a control cord.

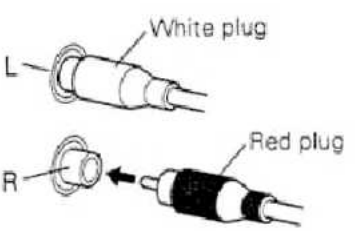
*3 Because the unit's PHONO input terminals are exclusively for MM, use MM-type cartridges for the analog player connected.

*4 When connecting a cassette deck, set the PHONO/LINE switch to the LINE position.

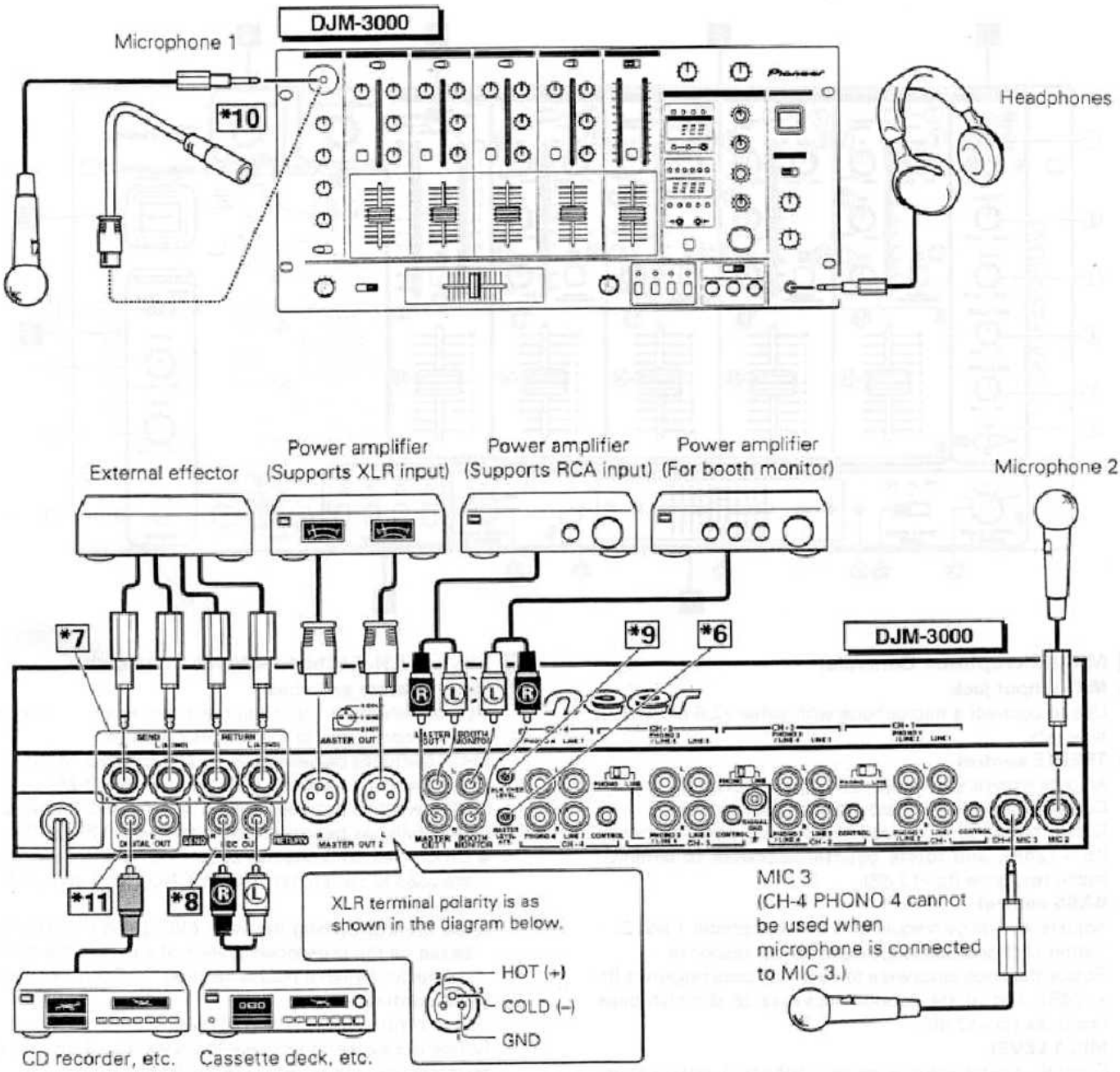
*5 When connecting an analog record player, set the PHONO/LINE switch to the PHONO position.

Connecting audio cords

Use the cords with the red and white pin plugs.
Connect the white plug to "L" and the red plug to "R". Make sure to insert the plugs completely.



2. Connection of Outputs, Microphones, etc.



*6 **MASTER LEVEL ATT.**
(Master output-level attenuator shaft)
This shaft is used to decrease the output level to protect connected amplifiers and speakers from excessive input. (Attenuation: –∞ to 0 dB)

*7 Connect if you want to use another device for adjusting sound quality.
SEND (output):
Connect this to the external effector's input terminal.
When using a monaural input effector, connect it to the L channel output. The effector will receive LR-mixed sound.
RETURN (input):
Connect this to the external effector's output terminal.
When using a monaural output effector, connect it to the L channel output. The signals from the effector will be input to both the L and R channels.

*8 **REC OUT**
Outputs sound to the same output source as the master output, without being influenced by the master volume, master balance and MONO/STEREO switches.

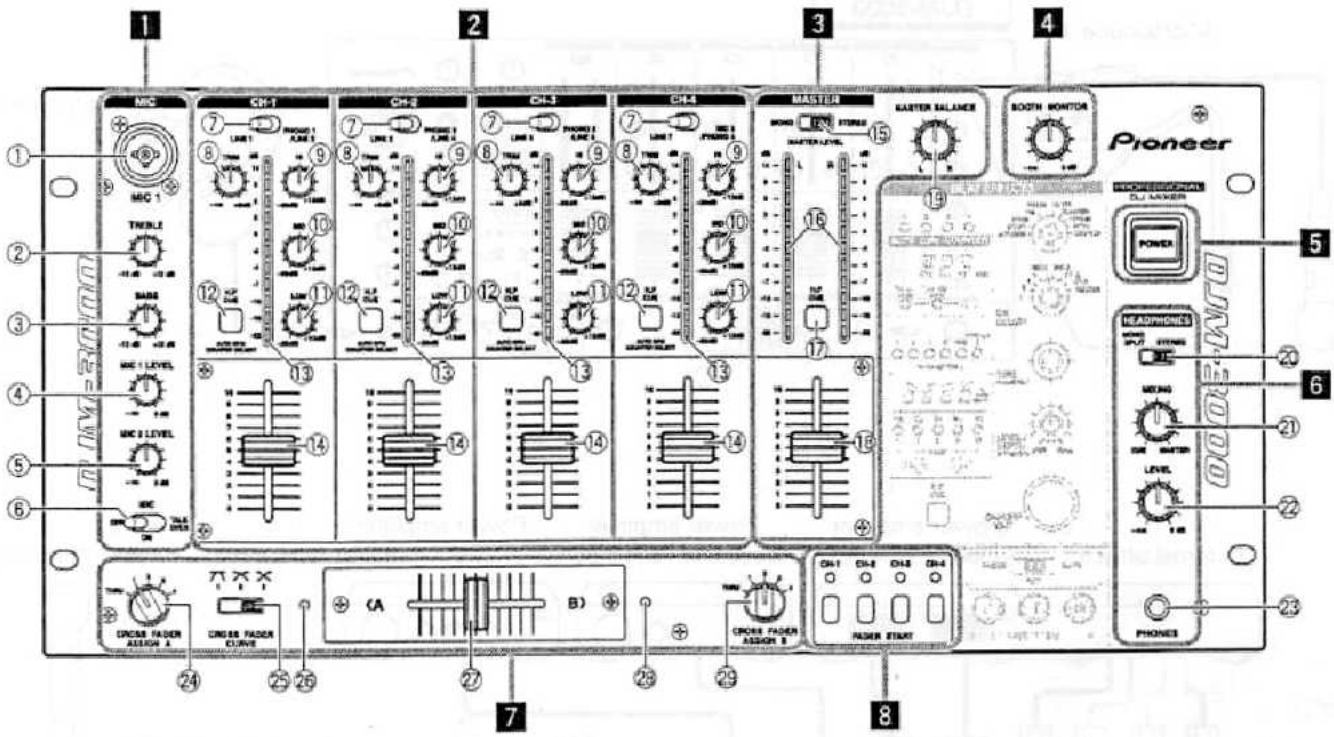
*9 **TALK OVER LEVEL attenuation control**
Attenuates sound level from sources other than MIC 1 and 2 when the MIC switch is set to the TALK OVER position (range: –4 to –20 dB).

*10 **MIC 1**
Supports microphones with either XLR or PHONE type jacks.

*11 **DIGITAL OUT**
Outputs same source as the master output.
The output level is not affected by MASTER LEVEL ATT. (*6).

PART NAMES AND FUNCTIONS

Control Panel



1 MIC (Microphone Controls)

① **MIC 1 input jack**
Use to connect a microphone with either XLR or PHONE type jack.

② **TREBLE control**
Adjusts high-range frequencies on microphone 1 and 2.
Center click position is provided for flat response.
Rotate the knob clockwise to augment treble response (to +12dB), and rotate counterclockwise to diminish treble response (to –12 dB).

③ **BASS control**
Adjusts low-range frequencies on microphone 1 and 2.
Center click position is provided for flat response.
Rotate the knob clockwise to augment bass response (to +12dB), and rotate counterclockwise to diminish base response (to –12 dB).

④ **MIC 1 LEVEL**
Controls sound volume on microphone 1 (attenuation: –∞ to 0 dB)

⑤ **MIC 2 LEVEL**
Controls sound volume on microphone 2 (attenuation: –∞ to 0 dB)

⑥ **MIC switch**
Use to select microphone input.
OFF: Disables microphone 1 and 2
ON: Enables microphone 1 and 2
TALK OVER: Enables microphone 1 and 2 while attenuating other sound levels. The amount of attenuation can be controlled by setting the rear-panel TALK OVER LEVEL, within the range –4 dB to –20 dB.

2 CH-1 to CH-4 (Channel Input Controls)

⑦ **Input selector switches**
Use to select an input source from among the components connected to the various channels.
CH-1: Switches between LINE 1 and PHONO 1/LINE 2
CH-2: Switches between LINE 3 and PHONO 2/LINE 4
CH-3: Switches between LINE 5 and PHONO 3/LINE 6
CH-4: Switches between LINE 7 and MIC 3/PHONO 4

- On CH-1 to CH-3, the rear panel PHONO/LINE switches are used to switch between PHONO 1, 2, 3 and LINE 2, 4, and 6.
- On CH-4, switching between MIC 3 and PHONO 4 is based on the presence/absence of a plug in the MIC 3 connector (when a plug is inserted, MIC 3 is selected).

⑧ **TRIM control**
Use to control the input signal level.
Rotate clockwise to increase the level (to +9 dB); rotate counterclockwise to decrease the level (to –∞)

⑨ **HI control (high-range equalizer)**
Use to adjust high-range frequency of input.
When the dial is set to the center click setting, flat response is provided.
Rotate clockwise to increase response (to +12 dB), and rotate counterclockwise to decrease response (to –26 dB).

⑩ **MID control (mid-range equalizer)**
Use to adjust mid-range frequency of input.
When the dial is set to the center click setting, flat response is provided.
Rotate clockwise to increase response (to +12 dB), and rotate counterclockwise to decrease response (to –26 dB).

⑪ **LOW control (low-range equalizer)**
Use to adjust low-range frequency of input.
When the dial is set to the center click setting, flat response is provided.
Rotate clockwise to increase response (to +12 dB), and rotate counterclockwise to decrease response (to –26 dB).

⑫ **H.P CUE (Headphones cue switch)**
When this switch is pressed it lights orange and the corresponding channel is output to headphones. When the switch is pressed again the light goes out and the channel's output to the headphones is cut.
When the beat effector function is set to AUTO BPM, this switch functions to select the BPM display channel.

⑬ **Peak level meter**
Peak levels are displayed as they occur and maintained for 2 seconds.
Displays output level before channel fader adjustment.
Displayable range is from –22 dB to +14 dB.

⑭ **Channel fader lever**
Use to adjust the sound level at each channel.

3 MASTER (Master Controls)

⑮ **MONO/STEREO selector switch**
Use to select whether the master output and booth monitor output are monaural or stereo.

⑯ **MASTER LEVEL meter**
Displays output level following adjustment of the MASTER fader lever, and holds the display for 2 seconds.
Displayable range is from –22 dB to +14 dB.

⑰ **H.P CUE (Headphones cue switch)**
When this switch is pressed it lights orange and the master output is heard in the headphones. When the switch is pressed again the light goes out and the master output to the headphones is cut.

⑱ **MASTER fader lever**
Use to control the master output level.
The rear panel MASTER LEVEL ATT. control can also be used to reduce the output level.

⑲ **MASTER BALANCE control**
Use to adjust the balance of right-left channels for master output and booth monitor output.

4 BOOTH MONITOR Control

Use to adjust the output at the BOOTH MONITOR connectors on the rear panel. Not affected by the MASTER fader lever (⑱).

5 POWER Switch

6 HEADPHONES Controls

⑳ **MONO SPLIT/STEREO selector switch**
Use to select whether to split monitor sound on the left and right of the headphones or to keep sound in stereo form.
When set to MONO SPLIT, the headphones output is set to 2-channel monaural; the Left channel becomes the source selected with the H.P CUE switch, while the Right channel becomes the master output sound (only when MASTER H.P CUE switch is set to ON).

㉑ **MIXING control**
Use to adjust the headphones monitor sound.
When rotated fully clockwise, the master output sound only is heard (only when MASTER H.P CUE switch is set to ON). When rotated fully counterclockwise, only the channel selected with the H.P CUE switch (other than MASTER) is heard.
At the center click position, the master output and source selected with the H.P CUE switch are at equal levels.

㉒ **LEVEL control**
Use to control the headphones monitor level. When one of CH-1 to CH-4 is selected, this control is not affected by the MASTER fader lever (⑱) and the MASTER BALANCE control (⑲).

㉓ **PHONES (headphones jack)**

7 Cross Fader Controls

㉔ **CROSS FADER ASSIGN A switch**
When using the cross fader with two sources (A, B), this switch selects the source assigned to A.
THRU: When cross fader is not used, sets to THRU.
1-4: Use to select the channel (CH-1 to CH-4) assigned to A.
Channels other than those assigned to A and B can be output without passing through the cross fader.

㉕ **CROSS FADER CURVE selector switch**
Use to select one of three rising curve patterns for the cross fader function.

㉖ **Fader display A**
During the effect mix mode, displays the output of sounds from the channel selected with the CROSS FADER ASSIGN A switch.

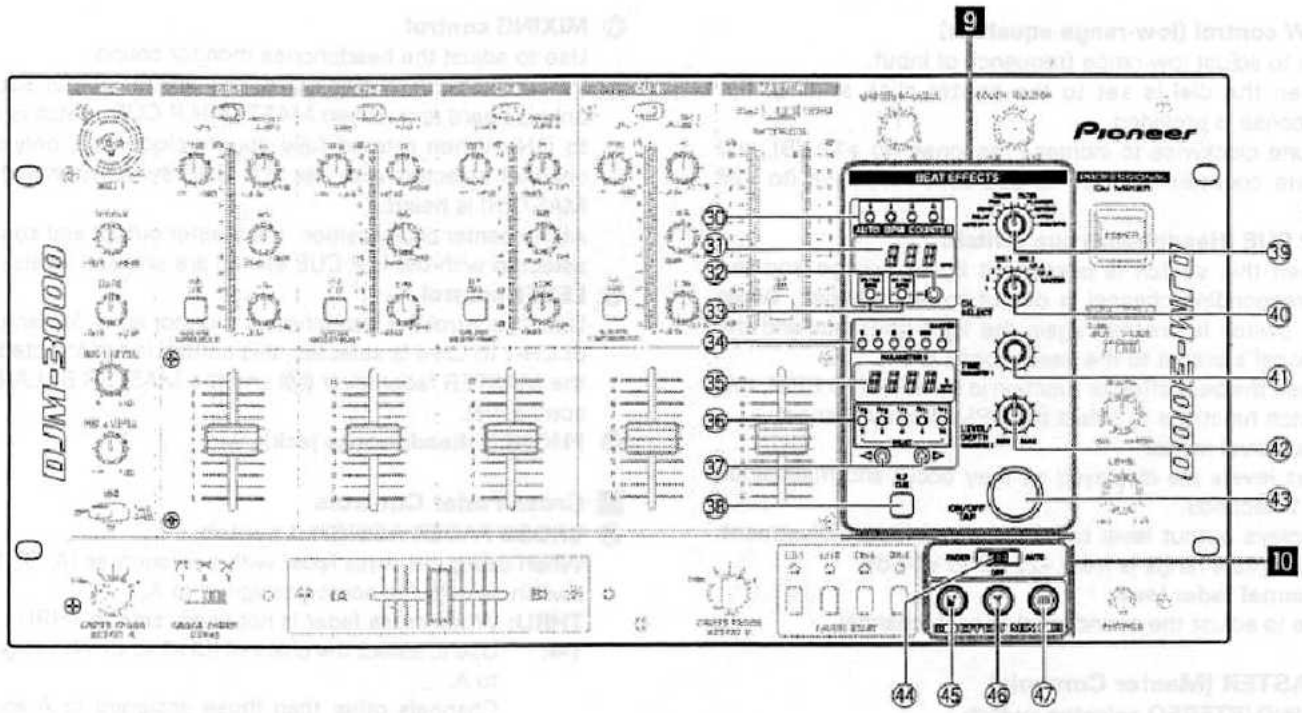
㉗ **Cross fader lever**
Use to adjust the mix of sounds from the sources assigned to A and B by the ASSIGN switches (㉔) and (㉙).

㉘ **Fader display B**
During the effect mix mode, displays the output of sounds from the channel selected with the CROSS FADER ASSIGN B switch.

㉙ **CROSS FADER ASSIGN B switch**
When using the cross fader with two sources (A, B), this switch selects the source assigned to B.
THRU: When cross fader is not used, sets to THRU.
1-4: Use to select the channel (CH-1 to CH-4) assigned to B.
Channels other than those assigned to A and B can be output without passing through the cross fader.

8 FADER START Switches

CH-1, CH-2, CH-3, CH-4
When a CD player (CMX-3000, CMX-5000, CDJ-1000, CDJ-100S, CDJ-700S or CDJ-500II) is connected to one of the above channels of this unit via a control cord, the CD player's CUE START/STOP operation will start when the channel fader is moved from "0" upwards, and will stop (back cue) when the channel fader is returned to "0". The indicator of the selected channel will light orange during this operation. Also, if a channel is assigned to the cross fader, the cross fader is given priority; when the Cross fader lever begins moving from the A side toward B side, the CD player assigned to the B side will start, and when the lever reaches the B side, the A side source will stop (back cue).



9 BEAT EFFECTS Controls

30 1-4 (Channel displays)
Displays the channel selected for BPM count.

31 AUTO BPM COUNTER
When AUTO BPM is selected with the Effect selector switch (39), displays the BPM of the channel (CH-1 to CH-4) selected with the H.P CUE switch (12). The indicator flashes during counting, or if it is unable to count BPM.

32 BPM counter range selector switch
- BPM can be selected in one of the ranges 70-139, 91-180, 70-180 or manual mode. Set the range best matching the track you are measuring.

33 BPM counter range displays
- Displays the BPM count range selected. When BPM count range 70-180 is selected, both indicators 70-139 BPM and 91-180 BPM light.
- If both indicators are out, it indicates manual mode. For more information about manual mode, see the item "BPM COUNTING" "on pages 18-19.

If the Effect selector switch (39) is set to DELAY, ECHO, PAN, TRANS, FILTER or FLANGER, the indicator will display the BPM of the source selected with the Effect CH. SELECT switch (40).

34 1-4, MIC, MASTER (Source displays)
Displays the source selected with the Effect CH. SELECT switch (40).
- If the Effect CH. SELECT switch is used to select "CF.A" or "CF.B", the channel that lights will be the one (1-4) selected with the respective ASSIGN switch (24), (29).

35 PARAMETER 1 (Parameter 1 / BPM counter)
The display contents change in accordance with the setting of the Effect selector switch (39).
- When AUTO BPM is selected, the display shows the BPM of the source selected with the Effect CH. SELECT switch (40). The indicator flashes during BPM counting, or when it is unable to count BPM.
- When SND/RTN is selected, nothing is displayed.
- When a setting other than AUTO BPM or SND/RTN is selected, the display shows the value of the effect set with Effect PARAMETER 1 control (41).

36 BEAT (Effect synchronous displays / Beat displays)
This display's contents differ depending on the setting of the Effect selector switch (39).
- When DELAY, ECHO, PAN, or TRANS are selected, the display shows the equivalent parameter 1 value for the BPM of the selected source. The display lights when the beat is in the range 1/2 to 4/1. If the beat value is below 1/2, pressing the Effect beat selector switch (◁) causes the value to become 1/4, and all display indicators go out. If the beat value is above 4/1, pressing the Effect beat selector switch (▷) causes the value to become 8/1, and all display indicators go out.
  If the value does not match the number of beats, the indicator for the nearest beat value will flash.
- When FILTER or FLANGER are selected, the display shows the equivalent parameter 1 value for the BPM of the selected source. The display lights when the beat is in the range 1 to 16. If the beat value is below 1, pressing the Effect beat selector switch (◁) causes the value to become 1/2, and all display indicators go out. If the value is above 16, pressing the Effect beat selector switch (▷) causes the value to become 32, and all display indicators go out.
  If the value does not match the number of beats, the indicator for the nearest beat value will flash.
- When REVERB is selected, the display shows the amount of reverberation applied.
- When PITCH is selected, the display shows the amount of pitch modification applied.
- No display appears when AUTO BPM or SND/RTN are selected.

㊲ Effect beat selector switches (◁, ▷)
Use this switch to change the value of Effect PARAMETER 1 control (㊶) in accordance with the BPM of the source selected with the Effect CH. SELECT switch (㊵). The setting value of this switch differs depending on the setting of the Effect selector switch (㊴).

- When DELAY, ECHO, PAN, or TRANS are selected, the parameter 1 value for the BPM of the selected source can be set to 1/4 beat, 1/2 beat, 1/1 beat, 2/1 beat, 4/1 beat, or 8/1 beat.
- When DELAY or ECHO are selected, values can be set to 1/4x, 1/2x, 1/1x, 2/1x, 4/1x or 8/1x, within a range such that the parameter 1 value does not exceed 3500 ms.
- When FILTER or FLANGER are selected, the parameter 1 value for the BPM of the selected source can be set to 1/2 beat, 1 beat, 2 beats, 4 beats, 8 beats, 16 beats, or 32 beats.
- When PITCH is selected, the value can be set to –100%, –50%, –33%, 0%, 33%, 50%, or 100%.
- When REVERB is selected, the value can be set to 10%, 20%, 35%, 50%, 65%, 80%, or 90%.
- This control is disabled when AUTO BPM or SND/RTN are selected.

㊳ H.P CUE (Headphones cue switch)
When this switch is pressed it lights orange, and beat effects are output to the headphones. Pressing the switch again disconnects the beat effect to the headphones and turns off the switch lamp.

㊴ Effect selector switch
Use to select desired effects (see page 12).

㊵ CH. SELECT (Effect channel selector switch)
Use to select the source you wish to apply effects to.

㊶ TIME (PARAMETER 1)
(Effect parameter 1 control)
This control is used to set the time parameter for the onboard effector (see page 14).

㊷ LEVEL/DEPTH (PARAMETER 2)
(Effect parameter 2 control)
This control is used to set quantitative parameters for the onboard effector (see page 14).

㊸ ON/OFF, TAP (Effect ON/OFF switch, TAP switch)
This switch produces different operations depending on the setting of the Effect selector switch (㊴)

- When DELAY, ECHO, PAN, TRANS, FILTER, FLANGER, REVERB, PITCH, or SND/RTN are selected, the switch operates to turn the selected effect ON/OFF.
  OFF: the orange lamp lights; ON: orange lamp flashes.
- When AUTO BPM is selected the switch becomes a "TAP" switch; by tapping the switch together with the source beat, the BPM can be input manually.
  When tapping the TAP switch to count the BPM, both BPM counter range displays (70-139 BPM and 91-180 BPM) go out, and the manual mode is enabled (see page 19).

⑩ EFFECT MIX Controls

㊹ FADER/OFF/AUTO (EFFECT MIX selector switch)
Use to select the cross fader effect mode.

FADER: Selects Effect Mix Fader mode. When this is selected, the Cross fader lever (㉗) can be used to control effects and perform cue start and back cue.

OFF: Normal mode

AUTO: The Effect Mix Auto mode. When this is selected, the Effect select/start switches (㊺, ㊻, ㊼) can be used to control effects, perform cue start and back cue.

㊺, ㊻, ㊼ Effect select/start switches
Use to select the type of Effect Mix desired (default is ECHO)

- The switch for the selected function flashes.

㊺ ECHO switch
㊻ ZIP switch
㊼ ROLL switch

USING THE EFFECT FUNCTIONS

With the built-in digital signal processor (DSP), sound effects can be enjoyed and BPM measured.

Features of Various Effectors

AUTO BPM COUNTER

Automatically measures music BPM (beats per minute; tempo) and displays it digitally.
It not only counts the beat of bass sounds but also calculates (using a computer) the music's original BPM, which DJs require, and displays it digitally.
Thus, BPM can now be checked not only aurally, as was conventional, but also visually, enabling quicker, simpler mixing of music with different tempos.
Use of the TAP switch to input the beat manually makes it possible to set BPM for music for which it is difficult to measure (a capella, improvisation, etc.).

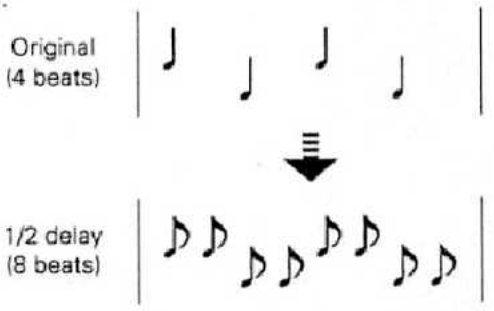
Beat Effector (Effects linked to BPM)

Links various effects to the BPM calculated with the aforementioned AUTO BPM COUNTER to enable unprecedented sound production.

1. DELAY (one sound repeated)

Quickly and easily mixes delayed sounds of 1/4, 1/2, 3/4, 1/1, 2/1, 4/1 and 8/1 beats.
Mixing with 1/2-beat-delayed sound, for example, will change the beat from 4 to 8.
Mixing with a 3/4-beat-delayed sound will change the rhythm to a bouncy one.

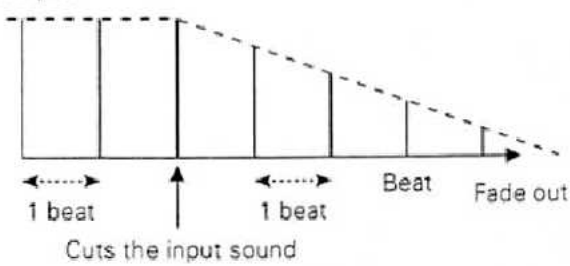
Example:



2. ECHO (repeated sounds)

Quickly and easily mixes echoes of 1/4, 1/2, 3/4, 1/1, 2/1, 4/1 and 8/1beats.
When input sound is cut with a 1/1-beat echo, for example, the music will fade out while sounds are repeated that match the beat.
When a 1/1-beat echo is imposed on the microphone, microphone sound will be played repeatedly, matching the beat.
Troll (musical round-type) effects can be produced by imposing a 1/1-beat echo on song vocals.

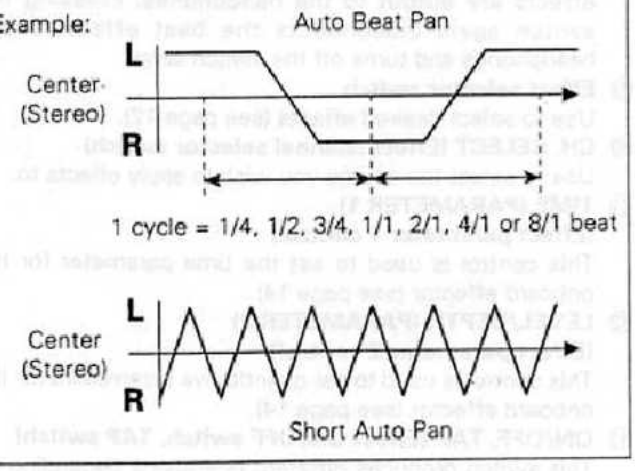
Example:



3. Auto Pan [PAN (L-R BALANCE)]

Automatically pans sound to the left and right (auto beat pan) to the rhythm of a 1/4, 1/2, 3/4, 1/1, 2/1, 4/1 or 8/1 beat.
Short auto pan, for panning sound to the left and right in a short time that cannot be covered manually, is also possible.

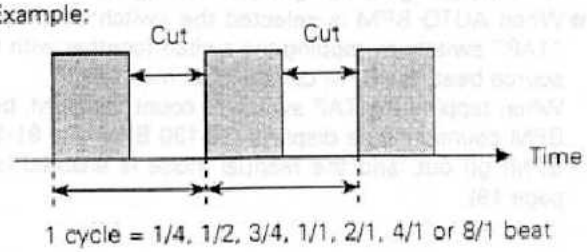
Example:



4. Auto Trans (TRANS)

Automatically cuts sound to the rhythm of a 1/4, 1/2, 3/4, 1/1, 2/1, 4/1 or 8/1 beat.

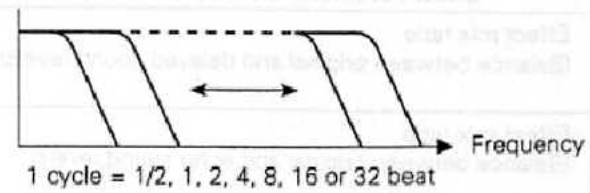
Example:



5. FILTER

Changes the tone greatly by shifting the filter's frequency in units of 1/2, 1, 2, 4, 8, 16, and 32 beats.

Example

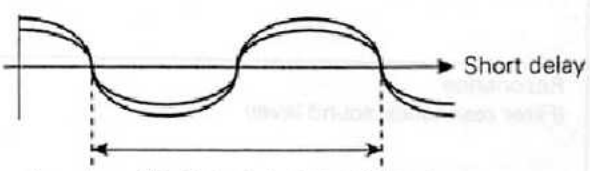


1 cycle = 1/2, 1, 2, 4, 8, 16 or 32 beat

6. FLANGER

Quickly and easily produces 1-cycle flanger effect for beats of 1/2, 1, 2, 4, 8, 16, or 32.

Example



1 cycle = 1/2, 1, 2, 4, 8, 16 or 32 beat

7. REVERB

Produces a reverberation effect.

8. PITCH (Pitch Shifter)

Shifts interval (pitch or key) within a range of ±1 octave. As the speed of analog-record turntables and CD players changes as a percent, interval changes can be corrected on a percent basis.
Applying the pitch shifter to microphone sound produces voice changer effects. Mixing with original sound produces a choral effect.

9. Send/Return (SND/RTN: External effect input/output)

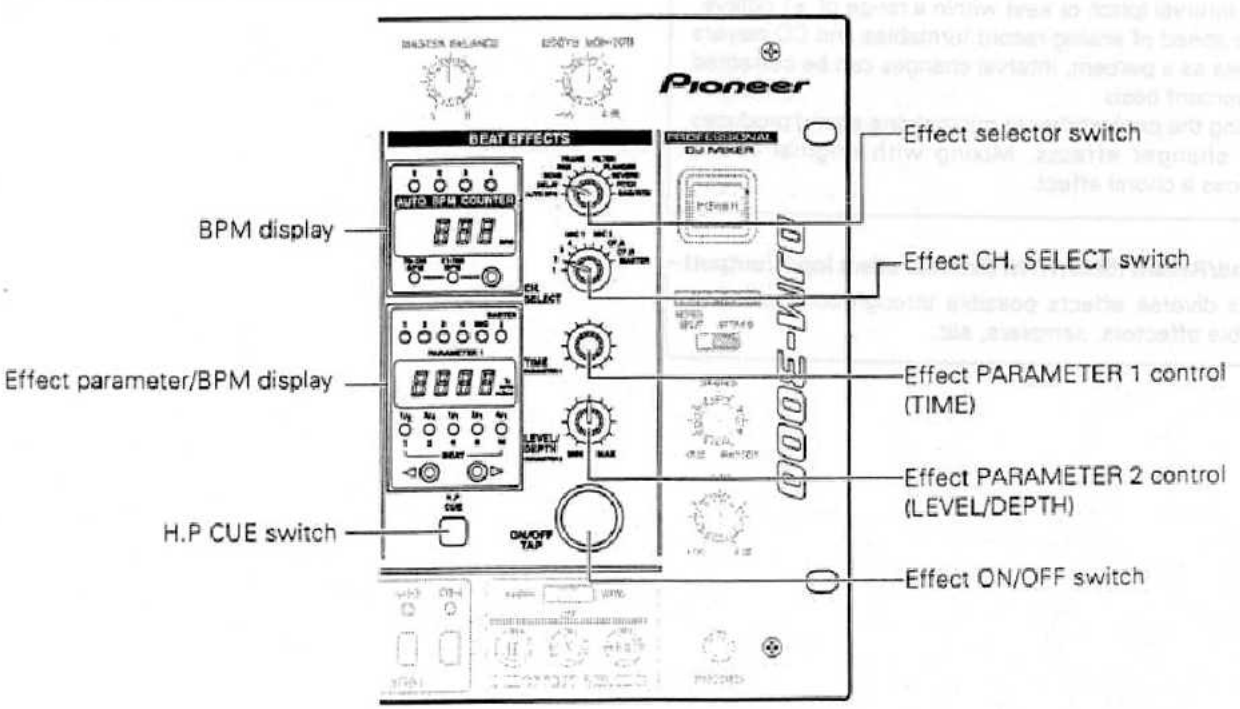
Makes diverse effects possible through connection to available effectors, samplers, etc.

Delay, Echo, Auto Pan, Auto Trans, Filter, and Flanger Operations

Items Set for Each Effect

Effect	Effect Parameter 1 (TIME)	Effect Parameter 2 (LEVEL/DEPTH)
DELAY	Delay time Setting range: 1 to 3500mSec, in 1msec steps	Effect mix ratio (Balance between original and delayed sound levels)
ECHO	Delay time Setting range: 1 to 3500mSec, in 1msec steps	Effect mix ratio (Balance between original and echo sound levels)
PAN (Auto pan)	Pan time (changeover time) Setting range: 10 to 16000mSec, in 5mSec steps for 10 to 1000 and 10msec steps for 1000 to 16000	Effect mix ratio (Balance between original and panned sound levels)
TRANS (Auto trans)	Trans time (changeover time) Setting range: 10 to 16000mSec, in 5mSec steps for 10 to 1000 and 10msec steps for 1000 to 16000	Effect mix ratio (Balance between original and cut sound levels)
FILTER	Filter time (cycle) Setting range: 10 to 16000mSec, in 5mSec steps for 10 to 1000 and 10msec steps for 1000 to 16000	Resonance (Filter resonance sound level)
FLANGER	Flanger time (cycle) Setting range: 10 to 16000mSec, in 5mSec steps for 10 to 1000 and 10msec steps for 1000 to 16000	Feedback (Flanger feedback sound level)

Example: Applying the delay effect to music on CH-2.



1 Set the Effect selector switch to DELAY.

2 Set the Effect CH. SELECT switch to 2.

- The Effect parameter/BPM display LED "2" will light.
- The BPM of the music input to CH-2 will be displayed on the AUTO BPM COUNTER.
  - The BPM band that matches the music on CH-2 can be selected with the BPM counter range selector switch.
  - The counter will flash if BPM cannot be counted for more than 2 seconds. In this case, use manual mode to make settings (see page 19).

3 Set the parameter value.

When the H.P CUE switch (in the BEAT EFFECTS controls) is pressed, the effect can be confirmed by listening to the headphones output.

Setting the Delay Time

- Setting the delay time to match one beat of the BPM displayed on the AUTO BPM COUNTER makes effect application more effective.
- By pressing the Effect beat selector switch (◁ or ▷), delay time of 1/4 to 8/1 can be set for one beat of the counted BPM.
- More precise delay times can be set with the Effect PARAMETER 1 control (TIME).
- As "1/2" will light on the beat display if delay time is set to 1/2 of one beat of the BPM, the parameter value can be set using the beat display as a guide.

Setting to Balance Original and Delayed Sound Levels

- The balance between original and delayed sound levels is set using the Effect PARAMETER 2 control (LEVEL/DEPTH). Turning this control to the left will decrease delayed sound and turning it to the right will increase it.

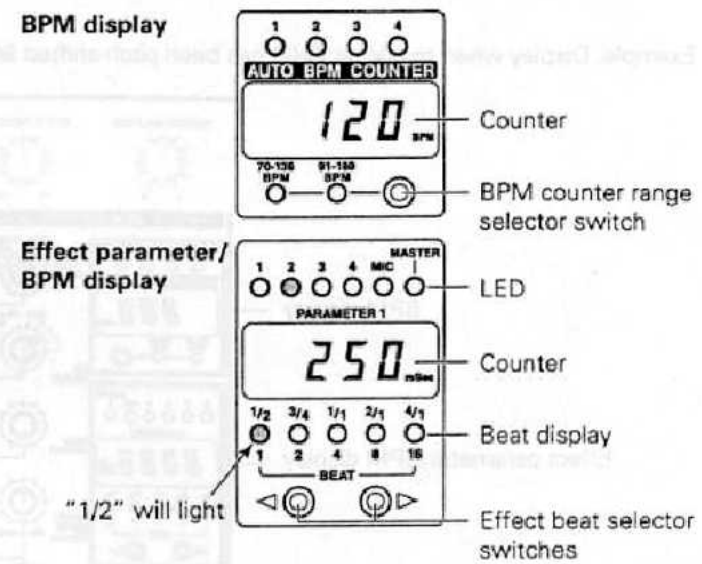
4 Turn on the Effect ON/OFF switch.

- The Effect ON/OFF switch will flash orange, and the delay effect will be applied to master output.
- If the switch is pressed once more, the effect will be turned off.
  - If it is turned on in time to the beat, the effect's cycle will also start on the beat.

Echo, auto pan, auto trans, filter, flanger can also be set similarly.

Precautions:

- If the channel has been changed with the Effect CH. SELECT switch when delay, echo, reverb (pages 16 and 17) and similar effects have been turned on, all of the reverberation of the prior channel's effects will be output.
- Only operate the Effect selector switch when effects are off (when the Effect ON/OFF switch is lit orange). Operating it with effects on could generate noise.
- Display where a 1/2-beat delay (250mSec) has been set to music with a BPM of 120 (time conversion: 500mSec).

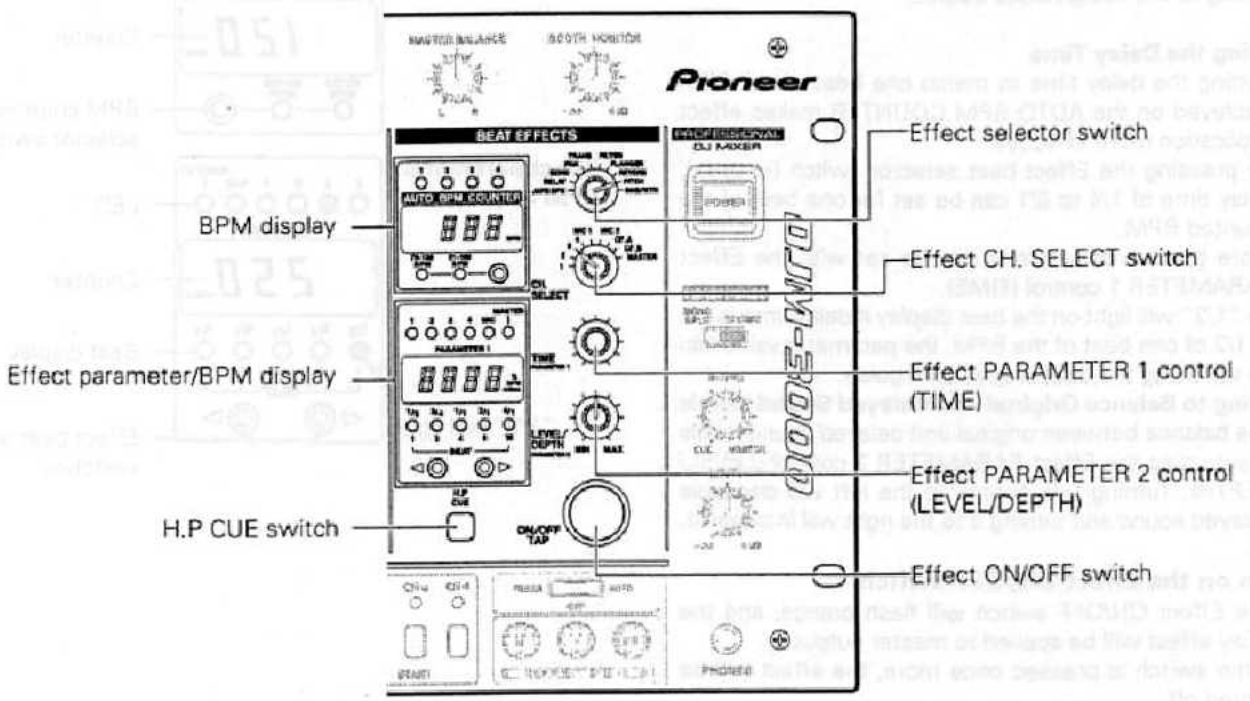


Operating Reverb and Pitch Shifter

Effector Settings

Effect	Effect Parameter 1 (TIME)	Effect Parameter 2 (LEVEL/DEPTH)
REVERB	Reverb time (echo time) Setting range: 1 to 100%, in 1% steps	Effect mix ratio (Balance between original and reverb sound levels)
PITCH (Pitch Shifter)	Pitch Setting range: 0 to ±100%, in 1% steps	Effect mix ratio (Balance between original and pitch-shifted sound levels)

Example: Display when music on CH-3 has been pitch-shifted 90%.



1 Set the Effect selector switch to PITCH.

2 Set the Effect CH. SELECT switch to 3.

- The Effect parameter/BPM display LED "3" will light.
- The entire BPM display will turn off.

3 Set the parameter value.

When the H.P CUE switch (in the BEAT EFFECTS controls) is pressed, the effect can be confirmed by listening to the headphones output.

Setting Pitch

- Pressing ▷ on the Effect beat selector switch will increase the pitch setting +33%, +50% or +100%, while pressing ◁ will decrease it −33%, −50% or −100%.
- More precise pitch can be set with the Effect PARAMETER 1 control (TIME).

Setting the Balance Between Original and Pitch-Shifted Sound Levels

- The balance between original and pitch-shifted sound levels is set using the Effect PARAMETER 2 control (LEVEL/DEPTH). Turning this control to the left will decrease pitch-shifted sound and turning it to the right will increase it.

4 Turn the Effect ON/OFF switch on.

- The Effect ON/OFF switch will flash orange and the effect (pitch shift) will be applied to master output.
- If the switch is pressed once more, the effect will turn off.

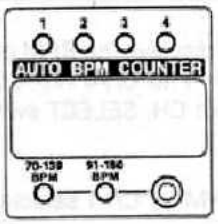
Reverb can be set similarly.

Precautions:

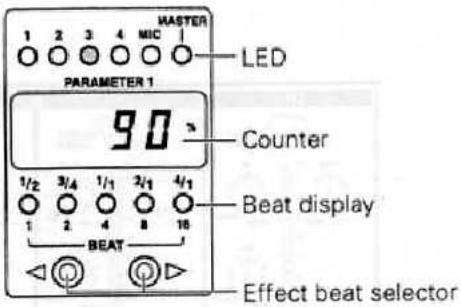
- If the channel has been changed with the Effect CH. SELECT switch when delay, echo (pages 14 and 15), reverb and similar effects have been turned on, all of the reverberation of the prior channel's effects will be output.
- Only operate the Effect selector switch when effects are off (when the Effect ON/OFF switch is lit orange). Operating it with effects on could generate noise.

- Display when CH-3 has been pitch-shifted by 90%.

BPM display



Effect parameter/ BPM display



Using an External Effector

The following example is for applying external effects to music on CH-3.

1 Set the Effect selector switch to SND/RTN.

2 Set the Effect CH. SELECT switch to 3.

- The Effect parameter/BPM display LED "3" will light.

3 Set external effector parameters, etc.

- When the H.P CUE switch (in the BEAT EFFECTS controls) is pressed, the effect can be confirmed by listening to the headphones output.

4 Adjust the return level.

- The return level from the external effector can be adjusted with the Effect PARAMETER 2 control (LEVEL/DEPTH).

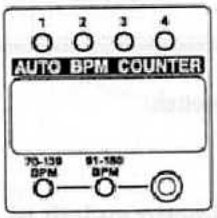
* Effect PARAMETER 1 control (TIME) will not function.

5 Turn on the Effect ON/OFF switch.

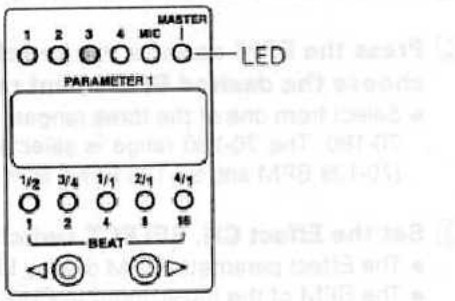
- The Effect ON/OFF switch will flash orange, and the external effect will be applied to music on CH-3.
- Pressing the switch once more will turn the effect off.

- Display when an external effect has been applied to CH-3.

BPM display



Effect parameter/ BPM display

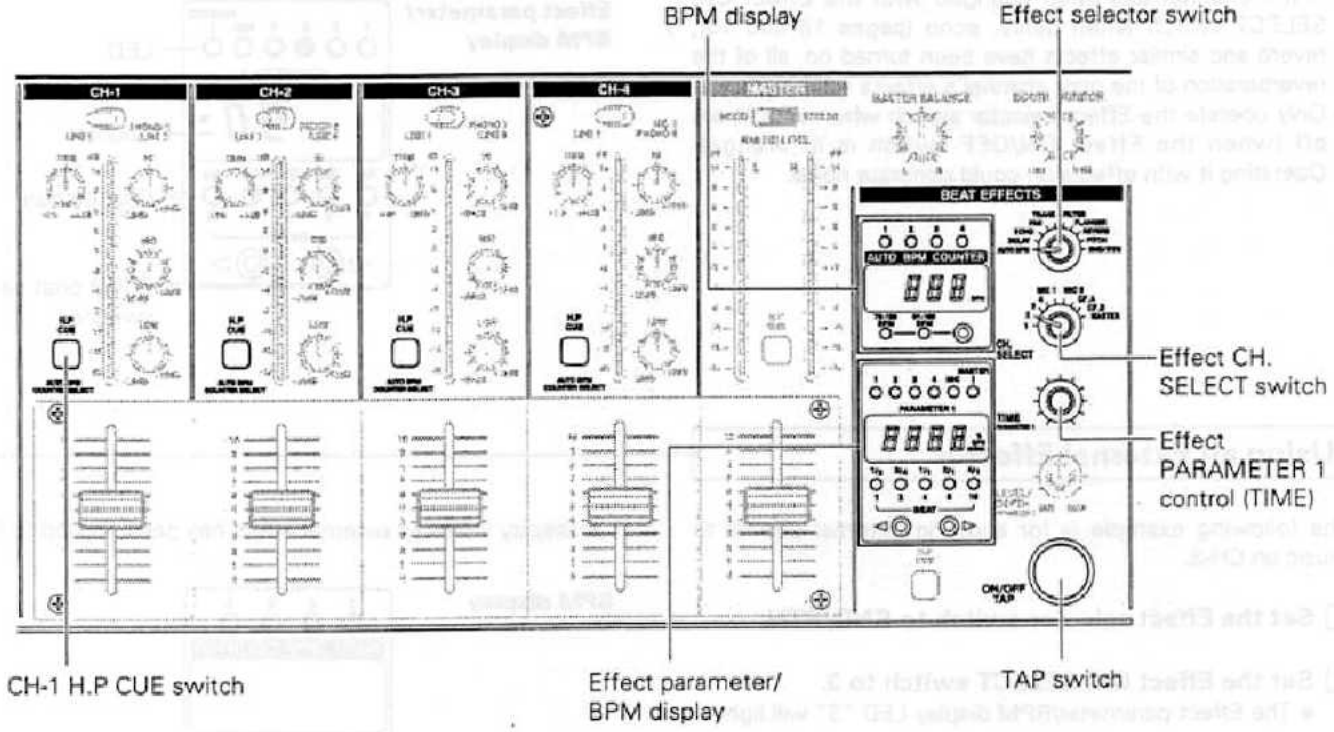


BPM COUNTING

Using the Auto Mode to Count BPM

This mode counts and displays the BPM of the channel selected with the H.P CUE switch and (when Effect selector switch is set to AUTO BPM, the CH-1 to CH-4 H.P CUE switch becomes the AUTO BPM COUNTER's channel select switch) the channel selected with the Effect CH. SELECT switch, thus making it easy to synchronize two tracks with different speeds (count range 70.0-180.0 BPM).

Example: Display of BPM for CH-1 selected with H.P CUE switch and CH-2(2) selected with Effect CH. SELECT switch:



1 Set the Effect selector switch to AUTO BPM.

2 Press the BPM counter range selector switch to choose the desired BPM count range.

- Select from one of the three ranges: 70-139, 91-180, or 70-180. The 70-180 range is selected with both LEDs (70-139 BPM and 91-180 BPM) light.

3 Set the Effect CH. SELECT switch to 2.

- The Effect parameter/BPM display LED "2" will light.
- The BPM of the music input to CH-2 will appear on the Effect parameter/BPM display's counter.

* If the BPM cannot be counted for 2 seconds or more, the counter will flash.

* Some tracks cannot be counted in AUTO BPM mode. In this event, set to manual mode to count the BPM (see page 19).

4 Press CH-1 H.P CUE switch.

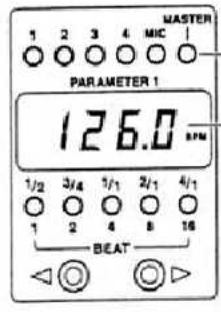
- The BPM display LED "1" will light.
- The BPM of the music input to CH-1 will appear on the AUTO BPM COUNTER.

* To measure BPM accurately, select only one channel (CH-1 to CH-4 H.P CUE switch) for the AUTO BPM COUNTER.

- Display when the BPM of CH-1 and CH-2 (126) match.

BPM display

Effect parameter/ BPM display



Using the Manual Mode to Count BPM

■ **When BPM cannot be counted in AUTO BPM mode:**
If auto BPM counting is not possible, use the TAP switch for manual input.

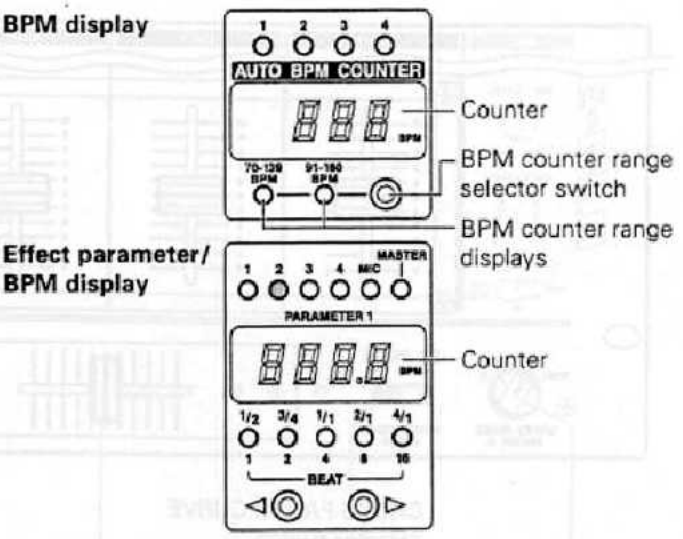
- When the TAP switch is pressed in time to the music's beat, the light in the BPM counter range display will turn off and manual mode will go into effect.
- The BPM value input with the TAP switch will be displayed on the Effect parameter/BPM display's counter (lower side), and the BPM display's counter (upper side) will turn off.
- To return to AUTO BPM mode, press the BPM counter range selector switch and set the counter range.

■ **When BPM cannot be counted during delay, echo, auto pan, auto trans, filter and flanger operations (pages 14 and 15):**
If BPM cannot be counted for more than 2 seconds during effect operations, the BPM display's counter (upper side) will flash. In such a case, change the Effect selector switch to AUTO BPM and use the TAP switch for manual input.

- After the BPM value input via the TAP switch has been displayed on the Effect parameter/BPM display's counter (lower side) and the Effect selector switch restored to the original effect, the BPM value input will be displayed on the BPM display's counter (upper side).

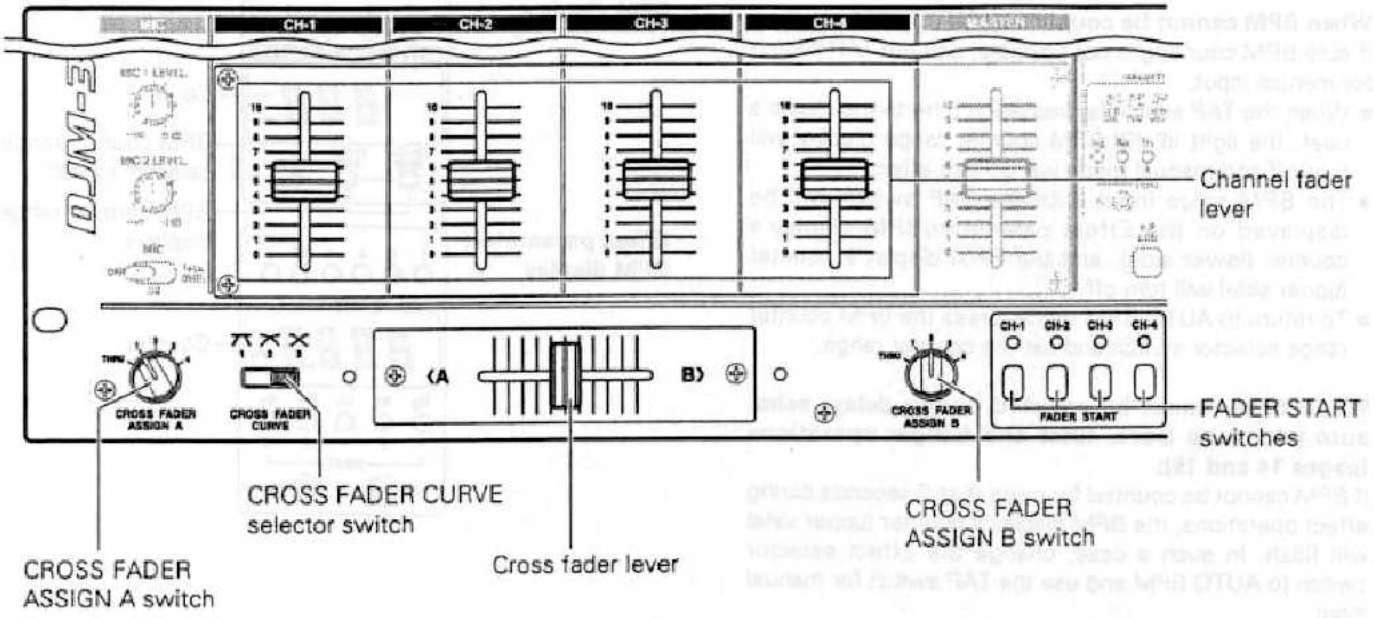
If you already know the BPM for a track, you can set the BPM input without using the "TAP" input.

- Change the Effect selector switch to AUTO BPM and press the BPM counter range selector switch and both BPM counter range displays (70-139 BPM and 91-180 BPM) will turn off.
- If the Effect PARAMETER 1 control (TIME) is turned, the Effect parameter/BPM display's counter (lower side) will display the BPM, with adjustment possible from the first digit.
  Turning the PARAMETER 1 control while pressing the TAP switch makes it possible to adjust the BPM from the first decimal place.
  When the BPM value has been set and the Effect selector switch restored to the original effect, the BPM value set will be displayed on the BPM display's counter (upper side).



USING THE FADER START FUNCTION

If the separately sold CMX-3000, CMX-5000, CDJ-1000, CDJ-100S, CDJ-700S and CDJ-500 II players are connected to CH-1 – CH-4, they can be started using the Channel fader lever or Cross fader lever, as long as the control cords have been connected.


Channel fader lever
FADER START switches
CROSS FADER CURVE selector switch
CROSS FADER ASSIGN B switch
CROSS FADER ASSIGN A switch
Cross fader lever

Fader Start Play (To Use Fade-in Operation with a Connected CD Player)

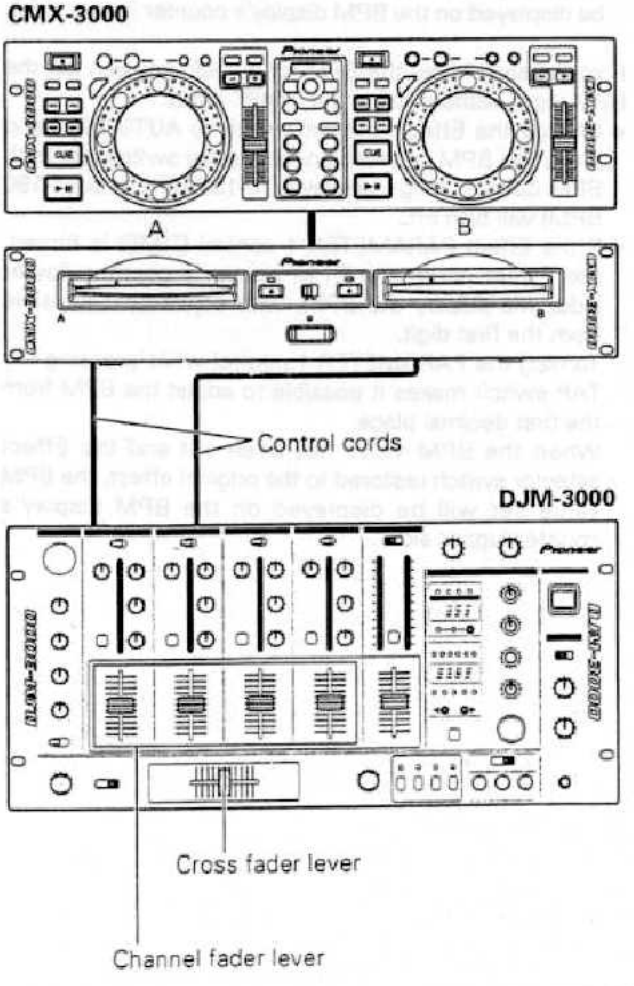
Fader start play will be possible when the unit has been connected with control cords to the CMX-3000, CMX-5000, CDJ-1000, CDJ-100S, CDJ-700S, and CDJ-500 II CD players for DJs. In other words, when the DJ mixer's channel fader or cross fader volume is turned up, the CD player's pause function will be released, and the music will start automatically and instantly. In addition, because the CD player can be restored to the cue point when the fader is returned to its original position, sampler-type play is also possible.

Cross Fader Start Play and Back Cue Play

When "A" is at the cue point during standby, it can be started simply by moving the Cross fader lever from the right (B) side to the left (A) side. "B" will back cue (return to the cue point) at the same time.
Moreover, when "B" is at the cue point during standby, it can be started simply by moving the Cross fader lever from the left (A) side to the right (B) side. ("A" will back cue at the same time.)

CD players for which fader start play is possible when connected to this unit

CMX-3000
CMX-5000
CDJ-1000
CDJ-100S
CDJ-700S
CDJ-500 II



Starting with the Channel Fader

1 **Turn on the FADER START switch (CH-1, CH-2, CH-3 or CH-4) of the channel connected to the CD player to be controlled.**
The indicator for the selected channel will light.

2 **Push the Channel fader lever all the way to the bottom.**

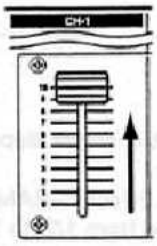
3 **Set a cue point on the CD player, and set the unit to standby (pause) at the cue point.**

4 **When you want to start the player, push up the Channel fader lever and the CD player will begin playing.**

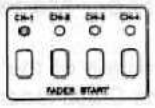
Precaution:
- Channels selected with the CROSS FADER ASSIGN A and B switches cannot be started with the channel fader.

The following is an example of starting a CD player connected to CH-1.

Example:



FADER START switch



Channel fader lever

If cue points have been set in advance when using the CMX-3000, CMX-5000, CDJ-1000, CDJ-100S, CDJ-700S and CDJ-500 II, it is not necessary to leave the CD player on standby at the cue point.
If the Channel fader lever is returned to its original position after playing has started, the CD player will return to the cue point and be on standby.

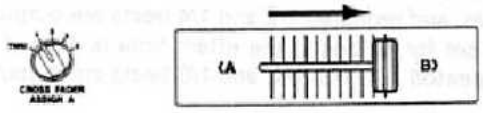
Starting with the Cross Fader

1 **Turn on the FADER START switch (CH-1, CH-2, CH-3 or CH-4) of the channel connected to the CD player to be controlled.**
The indicator for the selected channel will light.

2 **Using the CROSS FADER ASSIGN A and B switches, select the channel (CH-1, CH-2, CH-3 or CH-4) that the CD player is connected to.**

3 **Slide the Cross fader lever all the way in direction opposite the source you want to start.**
In the following example, startup is done with the CD player connected to CH-1 set to ASSIGN A.

Example:

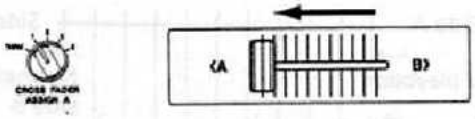


ASSIGN A switch Cross fader lever

4 **Set a cue point on the CD player, and set the unit to standby (pause) at the cue point.**

5 **Use the CROSS FADER CURVE selector switch to select the cross fader startup curve.**

6 **When the Cross fader lever is slid in the opposite direction as in "3", the CD player will begin playing.**



ASSIGN A switch Cross fader lever

If cue points have been set in advance when using the CMX-3000, CMX-5000, CDJ-1000, CDJ-100S, CDJ-700S and CDJ-500 II, it is not necessary to leave the CD player on standby at the cue point.
If the Cross fader lever is returned to its original position after playing has started, the CD player will return to the cue point and be on standby.

USING THE EFFECT MIX FUNCTION

When this mixer is combined with separately purchased CD players (CMX-3000, CMX-5000, CDJ-1000, CDJ-100S, CDJ-700S or CDJ-500II), the Cross fader lever can be operated to produced automatic linked fade-in and fade-out sound from Player A to Player B. If desired, the effect mode can be employed for simultaneous linked operation (requires connection of control cord). These operations can be performed by means of a single button.

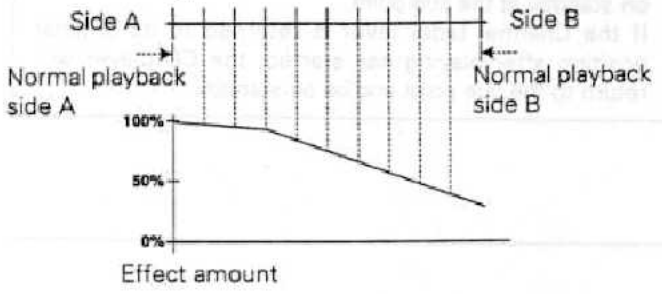
Effect Mix Features

Effect Mix Fader Mode

■ **ECHO**

The sound volume of the effect changes depending on the position of the Cross fader lever.
Depending on the setting of the Effect PARAMETER control, the ECHO repeat can be changed from 1/2, to 3/4, 1/1, 2/1 or 4/1 beats. When the lever reaches the other side, the channel assigned to the other side is connected.

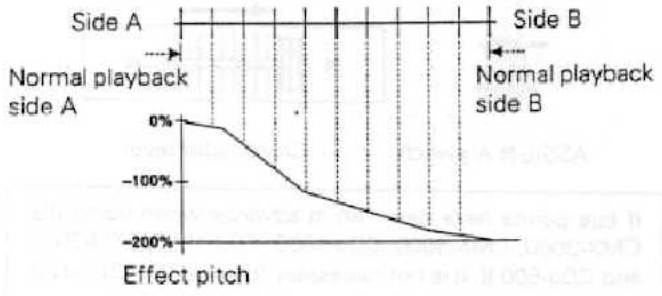
Example: Cross fader lever position and effect volume setting when effect is set for side A



■ **ZIP**

The pitch of the effect changes depending on the position of the Cross fader lever.
When the lever reaches the other side, the channel assigned to the other side is connected.

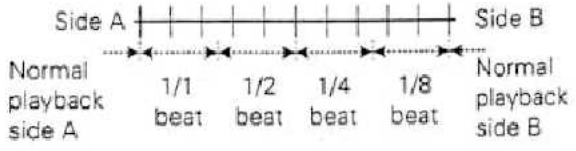
Example: Cross fader lever position and pitch setting when effect is set for side A



■ **ROLL**

The traverse of the Cross fader lever is divided into four quarters, and as the lever is moved from the effect side, the effect is set to 1/1, 1/2, 1/4, and 1/8 beats.
The beat pitch of the effect changes through the range 1/1 to 1/8 depending on the position of the Cross fader lever. When the lever reaches the other side, the channel assigned to the other side is connected.

Example: Cross fader lever position and beat setting when effect is set for side A

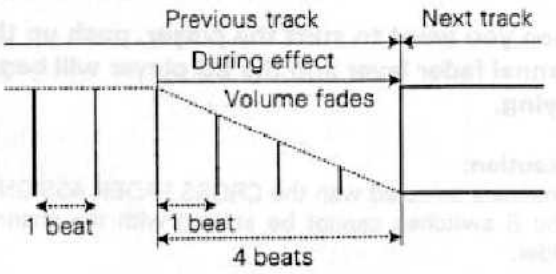


Effect Mix Auto Mode

■ **ECHO**

The volume of the effect fades at the effect time set in accordance with the setting of the Effect PARAMETER control, and leads into the next track.

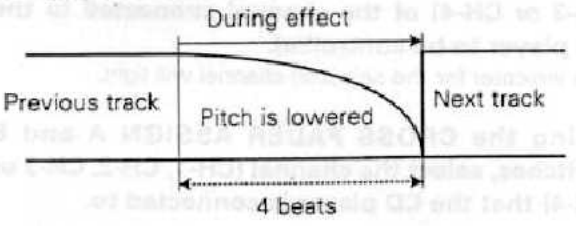
Example: When set for 4-beats



■ **ZIP**

The pitch of the effect fades at the effect time set in accordance with the setting of the Effect PARAMETER control, and leads into the next track.

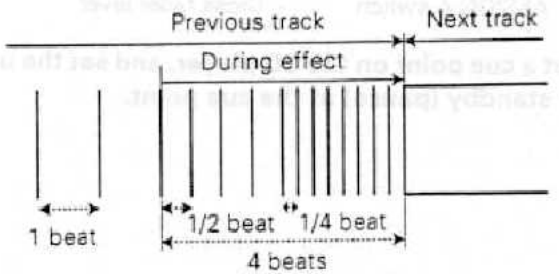
Example: When set for 4-beats



■ **ROLL**

The ROLL pattern changes in accordance with the setting of the Effect PARAMETER control.
When set for 1 beat or 2 beats, outputs a repeated 1/4 beat sound.
When set for 4 beats or 8 beats, the effect time is divided into two, and repeated 1/2 and 1/4 beats are output.
When set for 16 beats, the effect time is divided into four, and repeated 1/1, 1/2, 1/4, and 1/8 beats are output.

Example: When set for 4 beats



Selecting the Effect Mix Function

Use the EFFECT MIX selector switch to select the desired operation mode.

OFF: Normal mode
- No Effect Mix operation.
- All three Effect select/start switches (ECHO, ZIP, ROLL) will remain unlighted.
- The cross fader left-right Fader displays A and B will both be unlighted.

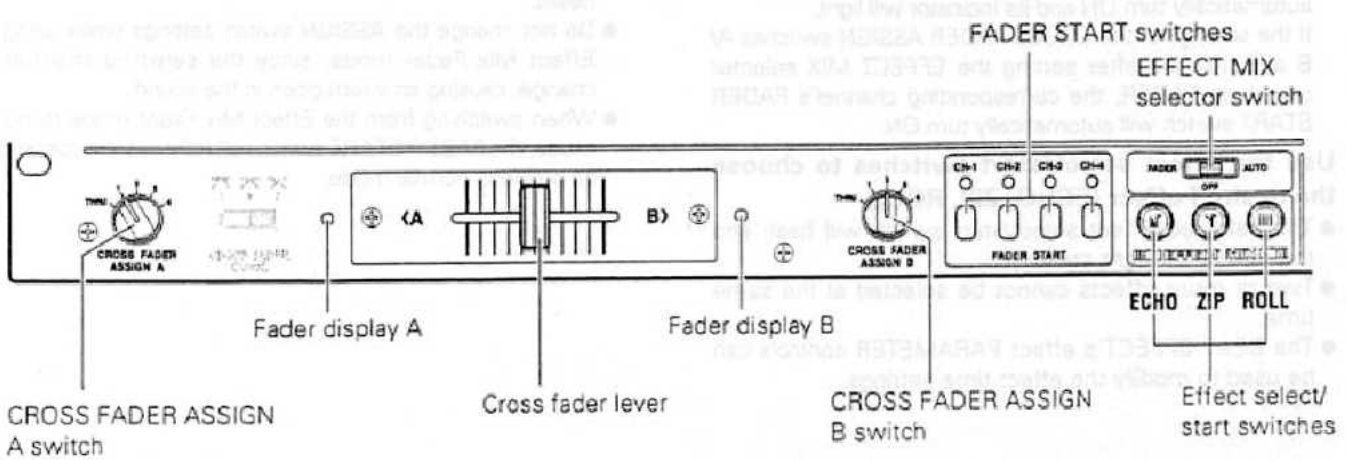
FADER: Effect Mix Fader Mode
- The Cross fader lever can be used to manipulate effects, and to perform cue start/back cue.
- Of the three Effect select/start switches (ECHO, ZIP, ROLL), the selected one will flash (default setting is ECHO), and the others will light steadily.
- The cross fader left-right Fader displays A and B will light as follows:

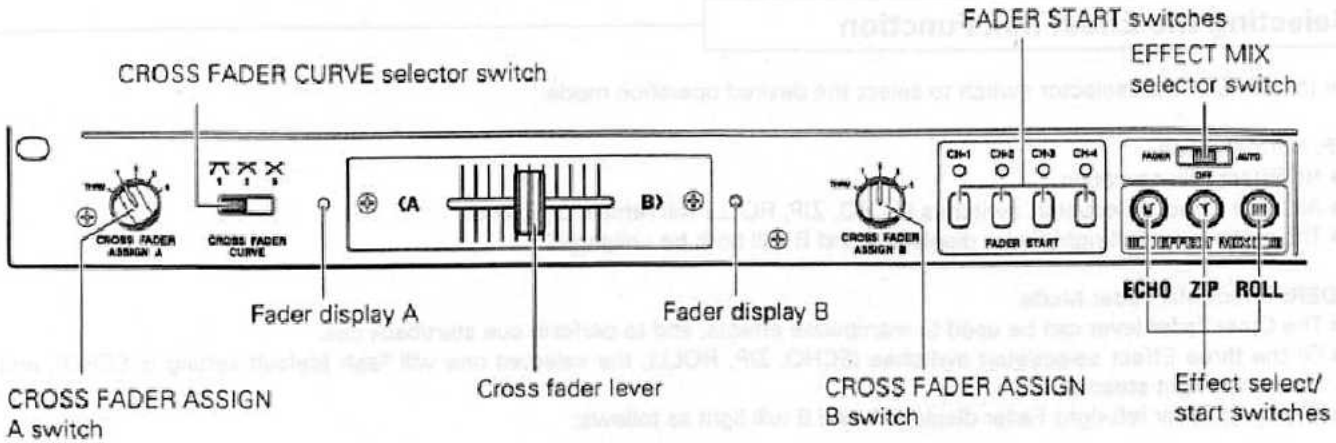
Condition	Fader Display A	Fader Display B
When Cross fader lever is at A side	LIGHTS	OFF
When Cross fader lever is at B side	OFF	LIGHTS
When mode is entered with Cross fader lever at midway point	LIGHTS	LIGHTS
When Cross fader lever is moved from A side to midway point after mode is entered.	FLASHES	OFF
When Cross fader lever is moved from B side to midway point after mode is entered.	OFF	FLASHES

AUTO: Effect Mix Auto Mode
- The three Effect select/start switches (ECHO, ZIP, ROLL) can be used to manipulate effects and to perform cue start/back cue (Cross fader lever does not operate).
- Of the three Effect select/start switches (ECHO, ZIP, ROLL), the selected one will flash, and the others will light steadily.
- The cross fader left-right Fader displays A and B will light as follows:

Condition	Fader Display A	Fader Display B
When mode is entered with Cross fader lever at A side	LIGHTS	OFF
When mode is entered with Cross fader lever at B side	OFF	LIGHTS
When mode is entered with Cross fader lever at midway point	LIGHTS	LIGHTS
When sound from A side is output	LIGHTS	OFF
When effects are applied to A side	FLASHES	OFF
When sound from B side is output	OFF	LIGHTS
When effects are applied to B side	OFF	FLASHES

The effect mix mode does not operate when Assign A and Assign B are set to the same channel.
(In this case, fader display A, fader display B, and the fader start display for the selected channel will all flash).





Effect Mix Fader Mode

1 Using the CROSS FADER ASSIGN switches (A and B) choose the channel (CH1–CH4) connected to the CD player you wish to use with cross fader effects.

- Be sure to assign different channels to the CROSS FADER ASSIGN switches A and B.

2 Set the CROSS FADER CURVE selector switch to 1 (⌐).

- When set to 2 or 3, the sound volume will become lower depending on the setting of the Cross fader lever.

3 Move the Cross fader lever to the side (A or B) from which the Effect Mix Fader Mode is to start.

In the Effect Mix Fader mode, the way the sound is initially heard is determined by the starting position of the Cross fader lever. For operating procedures, see step 6.

- When the Cross fader lever is on the A side, sound will be output from A.
- When the Cross fader lever is on the B side, sound will be output from the B side.

4 Set EFFECT MIX selector switch to FADER.

- Of the three Effect select/start switches (ECHO, ZIP, ROLL), the selected one will flash (default setting is ECHO), and the others will light steadily.
- The FADER START switch for the assigned channel will automatically turn ON and its indicator will light.
  If the settings of the CROSS FADER ASSIGN switches A/B are changed after setting the EFFECT MIX selector switch to FADER, the corresponding channel's FADER START switch will automatically turn ON.

5 Use the Effect select/start switches to choose the desired effect (ECHO, ZIP, ROLL).

- The selected Effect select/start switch will flash and the others will light steadily.
- Two or more effects cannot be selected at the same time.
- The BEAT EFFECT's effect PARAMETER controls can be used to modify the effect time settings.

6 Operate the Cross fader Lever

- When the Cross fader lever is moved from side A toward side B, the selected effect is applied to A, and when the lever reaches side B, the B output sound is heard. If the lever is returned to side A from midway, the effect applied to A turns OFF and the normal sound is output.
- When the Cross fader lever is moved from side B toward side A, the selected effect is applied to B, and when the lever reaches side A, the A output sound is heard. If the lever is returned to side B from midway, the effect applied to B turns OFF and the normal sound is output.

- In the Effect Mix Fader mode, the Cross fader lever can be used to apply effects. The CROSS FADER CURVE selector switch is enabled, but BEAT EFFECTS cannot be used.
- When ECHO or ROLL are selected, the original sound is recorded before the Cross fader lever is moved (Cross fader lever located at one side end). When the Cross fader lever is then moved, the recorded sound will be played back continuously. The maximum recording time possible is about 4 seconds with ECHO, and about 1 second with ROLL.
  If the recorded time is shorter than the effect parameter setting time, however, previously recorded sounds may be heard.
- Do not change the ASSIGN switch settings while using the Effect Mix Fader mode, since the selected channel will change, causing an interruption in the sound.
- When switching from the Effect Mix Fader mode to normal mode, the FADER START switch will return to the condition of its previous normal mode.

Effect Mix Auto Mode

1 Using the CROSS FADER ASSIGN switches (A and B) choose the channel (CH1–CH4) connected to the CD player you wish to use with cross fader effects.

- Be sure to assign different channels to the CROSS FADER ASSIGN switches A and B.

2 Move the Cross fader lever to the side (A or B) from which the Effect Mix Auto Mode is to start.

In the Effect Mix Auto mode, the way the sound is initially heard is determined by the position of the Cross fader lever. For operating procedures, see step 4.

- When the Cross fader lever is on the A side, sound will be output from A.
- When the Cross fader lever is on the B side, sound will be output from the B side.

NOTE:

In the Effect Mix Auto Mode, set the Cross fader lever to either the A or B side.

3 Set the EFFECT MIX selector switch to AUTO.

- Of the three Effect select/start switches (ECHO, ZIP, ROLL), the selected one will flash, and the others will light steadily.
- The FADER START switch for the assigned channel will automatically turn ON and its indicator will light.

If the settings of the CROSS FADER ASSIGN switches A/B are changed after setting the EFFECT MIX selector switch to AUTO, the corresponding channel's FADER START switch will automatically turn ON.

4 Use the Effect select/start switches to choose the desired effect (ECHO, ZIP, ROLL).

- The selected Effect select/start switch will flash and the others will light steadily.
- If the Effect select/start switch is pressed during output of the A side sound, the selected effect will be applied to A, and after the preset effect time has elapsed, sound B will be output.
- If the Effect select/start switch is pressed during output of the B side sound, the selected effect will be applied to B, and after the preset effect time has elapsed, sound A will be output.
- Two or more effects cannot be selected at the same time.
- The BEAT EFFECT's effect PARAMETER controls can be used to modify the effect time settings.

- In the Effect Mix Auto Mode, effects are applied and the output channel is changed automatically without the need to move the Cross fader lever. BEAT EFFECTS cannot be used.
- When ECHO or ROLL are selected, the original sound is recorded before the selected effect begins (while Cross fader lever is located at one side end), when the effect begins, the recorded sound will be played back continuously. The maximum recording time possible is about 4 seconds with ECHO, and about 1 second with ROLL.

  If this time is too short, previously recorded sounds may be heard.
- Do not change the ASSIGN switch settings while using the Effect Mix Auto mode, since the selected channel will change, causing an interruption in the sound.

Precautions when canceling the Effect Mix Auto mode:

- To cancel the Effect Mix Auto mode, move the Cross fader lever to the side indicated by the lighted fader display, then set the EFFECT MIX selector switch to OFF.
- If the Cross fader lever is not moved to the same side as the lighted fader display, the fader display may flash rapidly when the EFFECT MIX selector switch is set to OFF. In this event, move the Cross fader lever to the side indicated by the rapidly flashing fader display to return the mode to normal.
- When switching from the Effect Mix Auto mode to normal mode, the FADER START switch will return to the condition of its previous normal mode.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think there is something wrong with this component, check the points below. Sometimes the trouble may originate from another component. Thus, also check the other electrical appliances also in use.
If the trouble cannot be rectified even after checking the following items, contact your dealer or nearest PIONEER service center.

Problem	Possible Cause	Countermeasure
The power does not turn on.	• The power cord has not been connected.	• Connect the cord to a power outlet.
There is little or no sound.	• The Input selector switch is in the wrong position. • The connection cable hasn't been connected properly or has been disconnected. • The terminal or plug is dirty. • The rear panel MASTER LEVEL ATT. control has been set too low.	• Set the Input selector switch to the device currently playing. • Connect it properly. • Clean and reconnect. • Adjust the rear panel MASTER LEVEL ATT. control.
Sound is distorted.	• The rear panel MASTER LEVEL ATT. control has been set too high. • Input level is too high.	• Adjust the rear panel MASTER LEVEL ATT. control. • Adjust the TRIM control so that the input level approaches 0 dB on the peak level meter.
Can't use cross fading.	• CROSS FADER ASSIGN A and B switches haven't been set correctly.	• Set the CROSS FADER ASSIGN A and B switches to the correct cross fader source.
CD player's fader won't start.	• FADER START switch is off. • The rear panel CONTROL terminal hasn't been connected.	• Turn on the FADER START switch. • Use the control cord to connect the unit and CD player.
Effects don't work.	• Effect CH. SELECT switch hasn't been set correctly. • Effect PARAMETER 2 control (LEVEL/DEPTH) was set to the minimum (MIN.).	• Correctly select the channel to which effects should be applied. • Adjust the Effect PARAMETER 2 control (LEVEL/DEPTH).
External effector's sound distorted.	• The input level from the external effector is too high.	• Lower the external effector's output level or adjust the return level using the Effect PARAMETER 2 control (LEVEL/DEPTH).
Can't measure BPM. Measured BPM values are strange.	• Input level is too high or too low. • BPM can't be measured in some cases, depending on the music.	• Adjust the TRIM control so that the input level approaches 0 dB on the peak level meter. • Adjust input levels of other channels to approach 0 dB. • Press the TAP switch and set BPM manually.
Measured BPM value differs from value indicated on CD.	• Because of different BPM measurement methods, somewhat different values may be indicated.	• No countermeasures necessary.
Can't use CH-4's PHONO 4 input terminal.	• A microphone has been connected to MIC 3.	• Disconnect the microphone from MIC 3.
Can't apply effect mix.	• ASSIGN A and B switches are set to the same channel. • ASSIGN A and B switches are both set to THRU.	• Set ASSIGN A and B switches to different channels (1-4) • Set ASSIGN A and B switches to different channels (1-4)

Static electricity or other external interference may cause the unit to malfunction. To restore normal operation, turn the power off and then on again.

SPECIFICATIONS

Audio Section

Input terminal (input level/impedance)
- LINE 1-7 ..... −14 dBV (200 mV)/22 kΩ
- PHONO 1-4 ..... −54 dBV (2 mV)/47 kΩ
- MIC 1 ..... −54 dBV (2 mV)/3 kΩ
- MIC 2, 3 ..... −60 dBV (1 mV)/3 kΩ
- RETURN ..... −14 dBV (200 mV)/22 kΩ

Output terminal (output level/impedance)
- MASTER OUT 1 (RCA) ..... 0 dBV (1 V)/1 kΩ
- MASTER OUT 2 (XLR) ..... 4 dBm (1.23 V)/600 Ω
- REC OUT (RCA) ..... −10 dBV (1 V)/1 kΩ
- BOOTH MONITOR ..... 0 dBV (1 V)/1 kΩ
- SEND ..... −14 dBV (1 V)/1 kΩ
- PHONES ..... 0 dBV (1 V)/22 Ω
- DIGITAL OUT 1 (COAXIAL) ..... 0.5 V/75 Ω
- DIGITAL OUT 2 (COAXIAL) ..... 0.5 V/75 Ω

Frequency characteristics
- LINE/MIC ..... 20 Hz to 20 kHz
- PHONO (RIAA) ..... 20 Hz to 20 kHz

SN ratio
- LINE ..... 87 dB (with effects off)
- PHONO ..... 77 dB
- MIC ..... 64 dB

Total harmonic distortion rate
- LINE ..... Below 0.02%

Cross talk (1 kHz) ..... Over 70 dB

Channel equalizer (LINE/PHONO/MIC 3)
- HI ..... +12 dB, −26 dB
- MID ..... +12 dB, −26 dB
- LOW ..... +12 dB, −26 dB

Microphone equalizer (MIC 1, 2)
- TREBLE ..... +12 dB, −12 dB
- BASS ..... +12 dB, −12 dB

Effector
- DELAY and ECHO ..... 1 to 3500 mSec
- PAN, TRANS, FILTER and FLANGER ... 10 to 16000 mSec
- REVERB ..... 1 to 100%
- PITCH ..... 0 to ±100%

Electrical Section, etc.

Power supply voltage ..... AC 120 V, 60 Hz
Power consumption ..... 41 W
Operating temperature ..... +5°C to +35°C
Operating humidity ..... 5% to 85%
External dimensions ..... 482 (W) x 220 (D) x 107 (H) mm
12-19/32 (W) x 14-5/8 (D) x 4-7/32 (H) in
Weight ..... 6.7 kg
14 lbs 12 oz

Accessories

- Short-circuit pin plug 2
- Operating instructions 1
- Warranty 1

For improvement purposes, specifications and design may be subject to modification without notice.